

Claim 1 has been amended to more particularly point out and distinctly claim the subject matter which Applicant regards as his invention. No new matter has been added by way of this amendment.

Denial of Priority Under 35 U.S.C. § 119(e)

Applicant does not understand the Examiner's basis for denial of the priority date of June 25, 1996. The Examiner does not cite any provision in the patent statute, the C.F.R., or the M.P.E.P., in support of his statement that because the specification incorporates references published in 1997, denial of priority is proper.

Applicant respectfully submits that the addition of later published references does not bar applicant's claim for priority back to June 25, 1996, since the claims are fully enabled as of the June 25, 1996 priority date!. It is well-settled law that "while later issuing patents or publications may not be relied upon to establish the specification is enabling under § 112, first paragraph, reference may be made to such publications to construe claim language and in particular to prove the definiteness of claim terminology." *In re Glass*, 492 F.2d 1228, ____ n.3, 181 USPQ 31, 34 n.3 (C.C.P.A. 1974)(citing *In re Fisher*, 427 F.2d 833, 838, 166 USPQ 18, 23 (C.C.P.A. 1970))(emphasis omitted). *Accord In re Scarborough*, 500 F.2d 560, 182 USPQ 298 (C.C.P.A. 1974). Although not discussed in *Glass, supra*, or *Scarborough, supra*, it is implicit in these decisions that inclusion of later issued publications does not destroy priority. Thus, inclusion of later issued publications is permitted and does not destroy priority under 35 U.S.C. § 119(e) so long as no "new matter" is added pursuant to 35 U.S.C. § 132. Accordingly, withdrawal of the denial of Applicant's claim of priority to June 25, 1996, is respectfully requested.

Rejection of Claims 1-2 and 4-10 Under 35 U.S.C. § 112, Second Paragraph

Claims 1-2 and 4-10 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner contends that claim 1, from which the remaining claims depend, is indefinite in that it is drawn to an anti-immunodeficiency virus antibody yet the claim recites an antibody that binds to a cellular protein. Further, the Examiner requests clarification as to whether applicant intends an anti-chemokine receptor protein antibody.

Applicant respectfully submits that it is not indefinite to one skilled in the art that an antibody which binds to a cellular protein is an anti-immunodeficiency virus antibody. This is

because it is well-known in the art that an antibody need not bind directly to the virus in order to inhibit virus infection. For example, it is well-known to the virologist studying immunodeficiency viruses that viral binding to certain cellular proteins is a requisite step in the viral infection process, and that an antibody which binds to such a cellular protein may mediate antiviral effects by blocking the requisite virus-cell interaction. Indeed, the Examiner cites a reference (Hoxie et al., 1988, J. Virol. 62:2557-2568) in support of his rejection of claims 1-2, 4-5, and 8-9 under 35 U.S.C. § 102(b) which reference teaches an anti-immunodeficiency virus antibody which binds a cellular protein (CD4) necessary for virus entry into cells. Thus, claim 1 is not indefinite in any way since it is clear to one skilled in the art that an antibody to a cellular protein (*e.g.*, a chemokine receptor protein) essential for virus entry into cells is an anti-immunodeficiency virus antibody.

Additionally, Applicant does not understand the Examiner's request for clarification concerning whether Applicant intends an anti-chemokine receptor protein antibody. Applicant respectfully points out that the specification makes clear that the invention relates to an anti-chemokine receptor protein antibody since the invention relates to an antibody which binds CXCR4 which is defined in the specification as being a member of the chemokine receptor family of proteins (specification at page 1, line 24 to page 2, line 1; page 3, lines 5-12; page 10, lines 1-6). Thus, since it is clear that CXCR4 is a chemokine receptor protein, it is also clear that the anti-CXCR4 antibody of Applicant's invention is an anti-chemokine receptor protein antibody.

Applicants do not understand the Examiner's contention that terms which are clearly defined in the specification are somehow "indefinite" under 35 U.S.C. § 112, second paragraph. Nonetheless, Applicant, in an earnest effort to expedite prosecution of this application, has amended claim 1 to recite that the cellular protein to which the anti-immunodeficiency virus antibodies of his invention bind is a chemokine receptor protein. Ample support for this amendment is found in the specification as discussed previously herein (*see id.*). For these reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-2 and 4-10 under 35 U.S.C. § 112, second paragraph.

Rejection of Claims 1-2 and 4-8 Under 35 U.S.C. § 102 (a) or § 102 (b)

Claims 1-2 and 4-8 stand rejected under 35 U.S.C. § 102 (a) or § 102 (b) as being anticipated by Feng et al., 1996, Science 272:872-877 (hereinafter "Feng"), because, according to the Examiner, the antibodies of Feng are the same as those of the present invention.

Even assuming, *arguendo*, that Feng discloses the same antibodies as the present application, Feng cannot anticipate the instant invention since the date of Applicant's invention precedes May 10, 1996, the date of publication of Feng. A Declaration of the inventor of the present application, James A. Hoxie, under 37 C.F.R. § 1.131, asserting this fact accompanies this Amendment.

Accordingly, Feng is not prior art to Applicant's invention, and the Examiner's rejection under 35 U.S.C. § 102(a) or (b) should be withdrawn.

Rejection of Claims 1, 2, 4, 5, 8 and 9 Under 35 U.S.C. § 102 (b)

Claims 1, 2, 4, 5, 8 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hoxie et al., 1988, J. Virol. 62:2557-2568 (hereinafter "Hoxie"). The Examiner contends that the claimed antibodies are the same as those taught by Hoxie.

Applicant respectfully submits that Hoxie does not teach each and every element of Applicant's invention. Instead, claim 1, as amended, specifically excludes antibodies to CD4, which are the subject of Hoxie. Moreover, the specification makes it abundantly clear that CXCR4 is a chemokine receptor protein which is separate and distinct from CD4 in that, *inter alia*, CXCR4 can mediate HIV entry into cells in the absence of CD4 (specification at page 3, lines 5-6; page 12, lines 15-20). Further, Hoxie does not teach any anti-immunodeficiency virus antibodies other than those directed to CD4; therefore, Hoxie cannot anticipate the antibodies of Applicant's invention which are directed to CXCR4. For these reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1, 2, 4, 5, 8 and 9 under 35 U.S.C. § 102(b).

Rejection of Claims 9 and 10 Under 35 U.S.C. § 103 (a)

Claims 9 and 10 stand rejected under 35 U.S.C. § 103 (a) as being obvious under Feng, *supra*, because, according to the Examiner, the antibodies of Feng are the same as those of the present application.

As set forth previously herein, Applicant's invention precedes the publication of Feng on May 10, 1996; thus, Feng is not prior art to the instant invention. *See Declaration of inventor, James A. Hoxie, under 37 C.F.R. §1.131, enclosed herewith.*

Additionally, the fact that Cohen (1996, Science 272:809-810) (hereinafter "Cohen") may, according to the Examiner, suggest that Feng first disclosed fusin (now known as CXCR4) as a HIV cofactor, is not pertinent to Applicant's claims since Applicant has presented evidence that he was first to discover the claimed antibody. Further, Cohen was published simultaneously with Feng on May 10, 1996; therefore, for the reasons previously set forth herein with regard to Feng, Cohen cannot be prior art to the present invention since Applicant's invention also precedes Cohen. *See Declaration of Hoxie pursuant to 37 C.F.R. § 1.131.*

For the above-stated reasons, Cohen should not be considered pertinent prior art to Applicant's disclosure and the rejection of claims 9 and 10 as being obvious over Feng should be reconsidered and withdrawn.

Conclusion

Applicant respectfully submits that each rejection of the Examiner to the claims of the present application has been either overcome or is now inapplicable, and that each of claims 1-2 and 4-10 is in condition for allowance. Reconsideration and allowance of each of these claims are respectfully requested at the earliest possible date.

Respectfully submitted,

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enc. Declaration of James A. Hoxie under 37 C.F.R. § 1.131